

APPENDIX A

Listing of the Claims (October 11, 2010)

1. through 62. (Canceled).

63. (Currently Amended) A method of reducing the soluble chromate content in cement comprising mixing the cement with an iron (II) sulphate monohydrate-containing reducing agent comprising an iron (II) sulphate monohydrate-containing precipitate, which is produced by concentrating an iron (II) sulphate monohydrate-containing used sulphuric acid and separating the sulphuric acid from the obtained precipitate, ~~the precipitate having an average crystallite size of less than 2 μm , and the precipitate having a titanium content of 5 to 15 % by weight, based on iron or a manganese content of 1.5 to 4 % by weight, based on iron.~~

64. (Previously Presented) The method of Claim 63, characterised in that 0.01 to 5.0 % by weight of the iron (II) sulphate monohydrate-containing precipitate is added to the cement.

65. (Previously Presented) The method of Claim 63, characterised in that the iron (II) sulphate monohydrate-containing reducing agent is added to the powdered cement after milling and before or during filling in packages or bulk containers or transport containers.

66. (Previously Presented) The method of Claim 65, characterised in that after mixing with the powdered cement, the reducing effect of the iron (II) sulphate monohydrate-containing reducing agent increases at least temporarily as the storage time increases.

67. through 68. (Canceled)

69. (Previously Presented) A method of reducing the soluble chromate content in cement comprising mixing the cement with an iron (II) sulphate-containing reducing agent comprising (a) an iron (II) sulphate-containing precipitate, which is predominantly iron (II) sulphate monohydrate and is produced by concentrating an iron (II) sulphate-containing used sulphuric acid and separating the sulphuric acid from the obtained precipitate; and (b) green salt.

70. (Previously Presented) The method of Claim 69, characterised in that 0.01 to 5.0 % by weight of the iron (II) sulphate-containing precipitate is added to the cement.

71. (Previously Presented) The method of Claim 69, characterised in that the iron (II) sulphate-containing reducing agent is added to the powdered cement after milling and before or during filling in packages or bulk containers or transport containers.

72. (Previously Presented) The method of Claim 71, characterised in that after mixing with the powdered cement, the reducing effect of the iron (II) sulphate-containing reducing agent increases at least temporarily as the storage time increases.

73. through 78. (Canceled)

79. (New) The method of Claim 63, wherein the precipitate has an average crystallite size of less than 2 μm .

80. (New) The method of Claim 63, wherein the precipitate has an average crystallite size of between 0.1 and 1.0 μm .

81. (New) The method of Claim 63, wherein the iron (II) sulphate-containing used sulphuric acid is obtained from the production of titanium dioxide according to the sulphate process.

82. (New) The method of Claim 63, wherein the iron (II) sulphate-containing used sulphuric acid is obtained from a metal pickling process.

83. (New) The method of Claim 63, characterised in that when producing the iron (II) sulphate-containing precipitate, following separation of the sulphuric acid, reduction of the amount of sulphuric acid adhering to the separated precipitate takes place by means of further separation, partial neutralisation or neutralisation.

84. (New) The method of Claim 83, characterised in that reduction of the amount of sulphuric acid adhering to the separated precipitate takes place by washing with water, dilute acid, saturated FeSO_4 solution or diluted FeSO_4 -containing aqueous solutions.

85. (New) The method of Claim 83, characterised in that reduction of the amount of sulphuric acid adhering to the separated precipitate takes place by displacement with compressed air or by washing with steam.

86. (New) The method of Claim 83, characterised in that reduction of the amount of sulphuric acid adhering to the separated precipitate takes place by reacting the separated precipitate with water and metallic iron or an alkaline iron (II) compound at a temperature of greater than 60°C.

87. (New) The method of Claim 83, characterised in that reduction of the amount of sulphuric acid adhering to the separated precipitate takes place by means of partial neutralisation or neutralisation by adding powdered alkali compounds, selected from the group consisting of CaCO_3 , CaO , Ca(OH)_2 , MgO and/or Mg(OH)_2 or elutriations thereof.

88. (New) The method of Claim 83, characterised in that following reduction of the amount of sulphuric acid adhering to the separated precipitate or following partial neutralisation or neutralisation of the residual acid in the separated precipitate, a defined amount of water, an aqueous saline solution or a diluted sulphuric acid is added, and granulation takes place.

89. (New) The method of Claim 69, wherein the iron (II) sulphate-containing precipitate and the green salt are present in a ratio of 1:1 to 2:1.

90. (New) The method of Claim 69, wherein the iron (II) sulphate-containing precipitate has a titanium content of 5 to 15 % by weight, based on iron, or a manganese content of 1.5 to 4 % by weight, based on iron.

91. (New) The method of Claim 69, wherein the iron (II) sulphate-containing precipitate has an average crystallite size of less than 2 μm .

92. (New) The method of Claim 69, wherein the iron (II) sulphate-containing precipitate has an average crystallite size of between 0.1 and 1.0 μm .

93. (New) The method of Claim 69, wherein the iron (II) sulphate-containing precipitate has an average crystallite size of between 0.2 and 0.5 μm .

94. (New) The method of Claim 69, wherein the iron (II) sulphate-containing used sulphuric acid is obtained from the production of titanium dioxide according to the sulphate process.

95. (New) The method of Claim 69, wherein the iron (II) sulphate-containing used sulphuric acid has a titanium content of less than 1.5 % by weight.

96. (New) The method of Claim 69, wherein the iron (II) sulphate-containing used sulphuric acid is obtained from a metal pickling process.

97. (New) The method of Claim 69, wherein the separated precipitate contains 40 to 60 % by weight of iron (II) sulphate monohydrate, 3 to 10 % by weight of further metal salts, 15 to 30 % by weight of sulphuric acid and 10 to 13 % by weight of water.

98. (New) The method of Claim 69, characterised in that when producing the iron (II) sulphate-containing precipitate, following separation of the sulphuric acid, reduction of the amount of sulphuric acid adhering to the separated precipitate takes place by means of further separation, partial neutralisation or neutralisation.

99. (New) The method of Claim 98, characterised in that reduction of the amount of sulphuric acid adhering to the separated precipitate takes place by washing with water, dilute acid, saturated FeSO_4 solution or diluted FeSO_4 -containing aqueous solutions.

100. (New) The method of Claim 98, characterised in that reduction of the amount of sulphuric acid adhering to the separated precipitate takes place by displacement with compressed air or by washing with steam.

101. (New) The method of Claim 98, characterised in that reduction of the amount of sulphuric acid adhering to the separated precipitate takes place by reacting the separated precipitate with water and metallic iron or an alkaline iron (II) compound at a temperature of greater than 60°C.

102. (New) The method of Claim 98, characterised in that reduction of the amount of sulphuric acid adhering to the separated precipitate takes place by means of partial neutralisation or neutralisation by adding powdered alkali compounds, selected from the group consisting of CaCO_3 , CaO , Ca(OH)_2 , MgO and/or Mg(OH)_2 or elutriations thereof.

103. (New) The method of Claim 98, characterised in that following reduction of the amount of sulphuric acid adhering to the separated precipitate or following partial neutralisation or neutralisation of the residual acid in the separated precipitate, a defined amount of water, an aqueous saline solution or a diluted sulphuric acid is added, and granulation takes place.
